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Ql. No. I

11

Controversy between Mr. N. Venkatesa and Mr. J.S. Chakravarti about an article which appeared in the xmas number of the Economic Journal.

G.R.S. IX-5]

Previous references.

1922
(G.M)
(Recorded in L.S. & Branch)

File No. 283-16

Serial Nos.

Later references.

GENERAL AND REVENUE SECRETARIAT.

Serial Nos.

Part B for January 1916.

SUBJECT

Controversy between Mr. N. Venkatesaragiar + Mr. J. S. Chakravarti about an article which appeared in the May number of the Economic Journ.

SRS
1/12/22

G. R. S. 11] 1916-17

GENERAL AND REVENUE SECRETARIAT.

(Gen. Mis)

NOTES.

File No. 283-16

FILE HEADING.

Criticism of the work of the Met. Deptt by Mr. J. S. Chakravarti, M. A. in an article published in the issue of the Mysore Economic Journal.

From

The Met. Reporter to Government

No. 160 Dated 16. 9. 1916 Received 21. 9. 16

Diary No. 280	Enclos.	Spare Copies.	Serial No. 1

BRIEF ABSTRACT OF LETTER.

Encloses a memorandum with its accompaniments relating to the above subject.

NOTES AND ORDERS.

Submitted
VS
22. 9. 16.

With reference to the criticisms of Mr. Chakravarti, about an article which appeared

NOTES—First Sheet.

General and Revenue Secretariat. | File No. of 191

Serial No.

In the May number of the Economic Journal. For appendix.

Sec

KS
25/1/16

The passage which is objected to is reproduced in full on p. 5 of the memorandum now sent up by Mr. Venkatasamyar. There can be no doubt that in an article published in a journal having some official authority Mr. Chakravarthi was not justified in commenting upon the work of a department and he could have explained his reasons for adopting a different set of averages from those issued by the Department without making any reflection upon the nature of the information published by it. But at the same time it must be admitted that Mr. Venkatasamyar has greatly exaggerated the effects these statements will

NOTE—Contn. sheet.

GPB—70,000—17-12-15

G. R. S. 12]

General and Revenue Secretariat. | File No. of 191

Serial No.

have on the prestige of the department and need not have worked himself up to such a fever heat of resentment. The correspondence is lacking in dignity and moderation on both sides but I think that Mr. Chakravarthi has made all reasonable concessions to Mr. Venkatarangaiya's wounded feelings in the final corrections proposed by him. The whole correspondence may be removed with the remark that Mr. Chakravarthi has explained that the criticisms were not offered with a view to convey any reflections on the working of the depts but to suggest means for making the averages more reliable and as he has offered to prepare a statement to this effect no further action is necessary. Certain amendments are suggested to the statement which may be adopted

Hoyle

1st Dec 1916

15/12/16

Dewan

Read 17.12.1916 The following be recorded

NOTE—Contn. sheet.

G. R. S. 12]

General and Revenue Secretariat. | File No. | of 191

Serial No.	
611 / 18.11.16	Let Brown for perusal of the Viceroy's correspondence between the two officers. And if he approves, he may be enabled to see those members of Council & Councils informally at a meeting of the Council. Levy 15/11 As 15/11 I agree to the action suggested by the Hon.
3244 / 5.12.16	Member of Council. 4.12.16 do
	Do Paul Levy As 5/12

NOTE—Contn. sheet.

GPB—70,000—17-12-15

(For disposal at an Informal meeting)

No. C.881

7.12.1916

GENERAL AND REVENUE SECRETARIAT.

Council Matter.

SUBJECT.

Controversy between Mr. N. Venkatesa Iyengar and Mr. J.S. Chakravarti, about an article on rainfall statistics of the Meteorological Department published in the Mysore Economic Journal.

CIRCULATED TO THE MEMBERS OF COUNCIL.

By Order,
D. M. Narasimha Rao
Secretary to Government.

7th December 1916.

Extraordinary Member of Council. not circulated as 2nd member is in

First Member of Council. Seen.

Second Member of Council. 8.12

WD 2012—GPB—1 000—9-2-16

Drawn and note — 67 Revise the article to be published & the C. and the relevant portion. Secs C & D & Secretary to do. Secs C & D for favour of suggestions. Secretary 67

6

D.O. No. 168 Central Observatory,

Encs. 19 Bangalore. 16th September 1916.

Dear Sir,

I enclose herewith a memorandum with its accompaniments and to request that you will kindly place the same before Government.

Yours sincerely,

A. Venkatesa Iyengar

D.M. Narasinga Rao, Esq., B.A., B.L.,
Secretary to the Govt. of Mysore,
General Department,
BANGALORE

DIARY NO. 2801

1916--1917
SECTION Pu.
FILE NO. 283-16
SERIAL NO. (1)

M E M O R A N D U M

The Mysore Meteorological Department was formed in 1892-93. The late Dr. J. Cook was its first Director and remained as the Head of the Department for 16 years. There were at the time of the formation of the department 151 rain-gauge stations in the State, 77 at Taluk Head-quarters and 74 in outlying villages. In his first report on Rainfall-Registration in the State, Dr. Cook published the figures of monthly rainfall in 1893 for each of the 77 Taluk Head-quarter stations and for the 74 village stations, and also the average monthly rainfall of the 24 years 1870-1893 for each of the former stations. The rain records of Taluk Head-quarters which were being published monthly in the Gazette seem to have been the basis of Dr. Cook's averages for these stations. I have, however, no personal knowledge as I was at the time on the staff of the Central College. The original average figures are all in the handwriting of Dr. J. Cook. The averages for subsequent years have been calculated with reference to those published in the year 1893. No exception has been taken or comment made up to this time in regard to the Mysore averages by the Meteorological Department of the Government of India which, with its knowledge of the corresponding averages of the adjacent British Districts must therefore be presumed to have regarded our averages as fairly connoting the actual conditions in the State. Indeed, as will be seen from the extracts in enclosure I annexed hereto, the Meteorological Reporter to the Government of India has on several occasions expressed his appreciation of the valuable work of the Mysore Meteorological Department and quite recently the Director General of Observatories has

Enclosure I

addressed a communication through the Residency to the Government encouraging our work on upper air research. The Government also have been pleased to regard the work
Enclosure II of the Department as satisfactory. In the circumstances, I venture to think that the Mysore Meteorological Department has a fairly established reputation in regard to its past humble achievements in the field of Indian Meteorology.

2. At the end of 1895, Dr. Cook called from all the rain-gauge stations, for a special return of the monthly rainfall for as many years back as possible. The returns were received and were scrutinized by Dr. J. Cook. His object in calling for the returns and the result of his scrutiny may be expressed in his own words:-

"The chief object in calling for this Return was to ascertain in how many places there had been systematic registration of the rainfall for the past 25 years.

"The result has more than justified my anticipations of laxity and irregularity. In the whole Mysore country there are just 17 stations that have records since 1870; and the total number with records of the drought of 1875 and 1876, which caused the great famine, is only 33 out of a total of 169 stations, that is about 20 per cent. There are 59, or one-third of the whole, that cannot go further back than 1890 with their records.

"Many of the records are evidently untrustworthy and incomplete; and there are 14 stations that could not furnish the record for even two years back.

"I might easily have received the returns I wanted within a week or two, because with a proper system of recording it would not take half an hour to fill up the monthly rainfall even for the whole 25 years. It was therefore

very disappointing to have to wait, in spite of several reminders in many cases, till the middle of July before these returns were at all complete. Those also that came in latest were in several instances practically worthless on account of incompleteness and manifest inaccuracy.

"All this showed such an unsatisfactory system of recording the rainfall that I at once set about getting proper Rain Record books printed at the Government Press, with instructions in English and Kanarese about the care of the gauge, the measurement of the rain-fall, the recording of the same, etc. The books are made to show the Daily Rainfall -a year on a page- for 50 years; and will be distributed to the various stations, with instructions to have the reliable records of past years neatly copied in, and the book carefully preserved".

As will be seen from the above, the special returns were studied at the time, and notwithstanding the many manifest inaccuracies in a number of them, the yearly totals for the more important stations since 1870 as also the mean were published in the Annual Report for 1895 for what they were worth. See paras 8 and 9. The inaccuracies in the special returns do not in any way affect the correctness of the averages for 24 years (1870-1893) published in the Annual Report for 1893 in respect of the 77 Taluk Head-quarter stations; for, the said averages were apparently based on the figures published monthly in the Gazette and not on any special returns subsequently obtained. The statistics published in each month at the time were less liable to errors or calculation and transcription than those gathered and collected after a quarter of a century. It seems, therefore, obvious that, if one has to

choose between the two, the preference should naturally be in favour of the published statistics. One can thus easily understand why in 1895 Dr. Cook preferred to continue with averages worked out in 1893, based, as they seem to be, on the statistics published in the Gazette, and to discard the special returns of 1895 as being in the main incomplete and untrustworthy. Even a cursory perusal of these returns will show their general unreliability. I have indicated instances of these in paras 7 and 8 of my letter of the 14th July 1916 to the Dewan Sahib. Other instances can easily be multiplied. In the circumstances, Dr. Cook, after making such use of the special returns as could safely be done, had them lodged in the archives of the office.

Enclosure III

3. In 1915 Mr. Chakravarti called at my office to inquire what records of rainfall statistics were available. I mentioned to him the records we had in the office and showed him, among other papers, the special returns obtained in 1895 which, I said, had been put by on account of their incompleteness and general unreliability. He glanced through these returns, noticed Dr. Cook's remarks therein here and there and said he would like to have copies of these returns as well. I agreed to let him have copies of all the papers, especially as he undertook to pay for the copying clerk that might be entertained for the purpose. The special clerk employed copied out the figures from the office records into the printed forms supplied by Mr.Chakra-varti and the copies were passed on to him. The figures in the copies were not scrutinized in my office either as to their bearing on their potential value, as I had already told Mr. Chakravarti about their nature.

On the issue of Government Order, No.11179-83/ G.P.8-15-68, dated the 8th February 1916, Mr. Chakravarti spoke to me once as to the particulars which his intended compilation of rainfall statistics should contain in respect of District Head-Quarter and other stations . I suggested that, so far as might be practicable, statistics of daily rainfall might be given in respect of District Head-quarter stations and figures of monthly rainfall in regard to other stations. At the interview we had no conversation regarding the reliability or otherwise of the figures copied out for him.

4. When, therefore, Mr. Chakravarti's criticisms as to the rainfall averages of the Mysore Meteorological Department appeared in the last May number of the Economic Journal, I was fairly taken aback by the use -or rather misuse- he had made of the unpublished statistics he had obtained from the records of my office. The remarks which appear to me most objectionable are extracted below for ready reference:-

"It will be observed that all this trouble about correction of averages as given in the Meteorological Department annual rainfall registration reports arise from the fact that the Meteorological Department is not able to verify its averages by detailed figures for each individual year included in the peridd for which averages are calculated. On the other hand, as has been shown above, the averages which the Meteorological Department has put forward are contradicted by the details which that department itself furnishes. I think it is rather misleading for a department to publish average figures which cannot be supported by annual details and which in many instances are palpably incorrect. In the course of the present investigation elaborate sets of tables pre-

prepared on the assumption that the Meteorological Department averages are correct had to be rejected afterwards as useless."

In the first place, if notwithstanding the warning given as to the general unreliability of the special returns of 1895, Mr. Chakravarti had, for reasons of his own, thought it worthwhile to examine the published averages of the Department in the light of the special returns and if such examination led to deductions calculated to discredit the published averages of the Department, he should, in fairness, have asked me for an explanation of any apparent variations before assuming the inaccuracy of the published averages and basing criticisms on such assumption. This was not done. It cannot reasonably be suggested, as a reason for the omission, that, because I did not know how the original averages were arrived at by Dr. Cook in 1893 when I was on the staff of the Central College, I should be presumed to be unacquainted also with the special returns obtained in 1896 when I became a member of the Meteorological Department. Furthermore, while there is no record to show how Dr. Cook arrived at the averages in 1893, the special returns are still in my office and can be looked at and compared with other statistics available for purposes of verification or explanation.

Secondly, even if Mr. Chakravarti had considered it necessary to refer to me on the ground of my presumed ignorance, he might well have brought his discoveries to the notice of Government with a view to rectification of what appeared to him errors of the past. It was, I respectfully venture to suggest, contrary to official etiquette and discipline, for a public servant to condemn,

as Mr. Chakravarti has done, in a public print, the statistics published by a Department of Government as misleading, palpably incorrect, etc. The Meteorological Department had entertained no idea of preventing workers in the field of economics from utilizing any available statistics in support of any economic theories adumbrated by them. For purpose of Meteorology, however, this Department has regarded the special returns of 1895 as possessing little scientific value and has, therefore, withheld publication in details. Mr. Chakravarti obtained these statistics, not in the capacity ofaan ordinary student of economics for whom they would have remained inaccessible, but as an officer of Government. He could not, therefore, claim the same latitude, as an ordinary student engaged in scientific studies to pass adverse comments on the published statistics of the Department on the basis of the unpublished figures specially made available to him as an officer of Government. When, moreover, such comments were devoid of accuracy or substance, I felt that a grave injury had been done by Mr. Chakravarti to the long established reputation of the Mysore Meteorological Department. For a moment I hesitated to take action, with the thought oppressing me whether the prestige of a high placed officer would not weigh against the head of a small department as mine is. I brushed aside the idea of inaction, thinking that such prestige was not more sacrosanct than the reputation of a scientific Department of Government and that it was my duty to the Department with which I had so long been associated and to Government which was the custodian of its reputation, to make a representation in the matter. It was under such circumstances that I addressed my letter of the

14th July 1916 to the Dewan Sahib, remonstrating against the unfair comments of Mr. Chakravarti.

5. What transpired subsequently between Mr.Chakravarti and myself may be briefly told. I do not wish to dilate on this matter as it has assumed a personal aspect. I would, therefore, merely annex to this memorandum, for the perusal of Government, copies of the undermentioned correspondence that passed between us, and invite attention to a point or two emerging therefrom or connected therewith:-

Enclosure IV	1. D.O. No.41, dated 25th July 1916, from Mr. Chakravarti
" V	2. Reply, No.72 dated 27th July 1916, to do.
" VI	3. D.O. No.71, dated 9th August 1916, from do. (Note.- The article referred to in the D.O. was returned in original without copy being kept)
~~" VII~~	~~4. Reply No.97, dated 14th August 1916, to Mr.Chakravarti~~
" VII	4. Reply No.97, dated 14th August 1916, to Mr.Chakravarti
" VIII	5. D.O. No.82, dated 22nd August 1916, from do.
" IX	6. Reply No.120, dated 24th August 1916, to do.
" X	7. D.O. of the 28th August 1916 from do.
" XI	8. Reply, No.124 dated 28th August 1916, to do.
" XII	9. Note of an interview of the 29th August 1916 with a draft of letter which Mr. Chakravarti proposed to send to the Dewan Sahib and to the Editor of the Economic Journal.
" XIII	10. D.O. dated 29th August 1916 from Mr. Chakravarti, with the draft of an intended paragraph to the Economic Journal.
" XIV	11. Reply, No.129, dated 30th August 1916, to Mr.Chakravarti
" XV	12. D.O. No.94, dated 2nd September 1916, from Mr.Chakravarti, with a draft of a revised paragraph proposed to be sent to the Economic Journal.
" XVI	13. Reply No.135, dated 6th September 1916, to Mr. Chakravarti, with two enclosures.
" XVII	14. D.O. No.102 dated 7th September 1916, from Mr.Chakravarti, with a final draft paragraph to the Economic Journal.
" XVIII	15. Reply No.146 dated 11th September 1916, to Mr.Chakravarti.

With reference to the draft letter embodied in Enclosure XII -which purports to be a reply to my letter to the Dewan Sahib and intended for communication to the Dewan Sahib and the Editor of the Economic Journal- I do not propose to offer any remarks as regards the many fallacies and perversions of facts bristling therein. I wish, however, to invite attention to the passages marked A. to K. in the intended communication. Apart from the obvious impropriety of a discussion of this kind in a public journal, self-laudatory and deprecatory of the work of a Government Department, the question arises whether the role assumed by Mr. Chakravarti as the monitor, mentor and censor of the Head of a Department is justified by his official position. What right has he to suggest what the Meteorological Department should have done and to ridicule for what he conceives has been left undone from neglect or apathy? It is,perhaps, permissable for a student of economics having ample leisure and facilities to ransack ancient records in the course of his researches and found economic theories thereon. But the hard worked head of a small office who has his daily scientific observations to make from morning till evening on the bases of the latest appliances and methods, can scarcely afford time to indulge in barren studies of burried statistics possessing little scientific value at present. Furthermore, why should Mr. Chakravarti have left with me his intended communication couched in insulting language which, obviously, he had not the moral courage to read through in my presence or send to the Dewan Sahib ? Was it to deliberately wound my feelings again for my temerity in addressing the Dewan Sahib or was it to coerce me into submission to his dictation? A similar domineering attitude is also noticeable in his

letter of the 2nd September 1916 and the intended paragraph forwarded therewith. When, at last, on the - - - receipt of his letter of 7th September, I found that all forbearance on my part had been in vain, I thought I might as well let him know how I was impressed by his attitude, and so I wrote my letter of the 11th instant so as to avoid all further controversy on the subject.

6. I now beg to place the whole matter for the consideration and orders of Government.

A. Venkatesa Ayyar

Bangalore.
16th Sep. 1916

ENCLOSURE I

Extract from the Report on the Administration of the Meteorological Department of the Government of India in 1900-1901.

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i. * * * * *

"The Bangalore Observatory was started as a Second Class Observatory in 1891 and was converted into a First Class Observatory on the arrival of the equipment of ~~mm~~ self-registering instruments in 1894. Itis in several respects the best equipped Meteorological Observatory in India. The four Mysore Observatories have furnished excellent observations, and the Mysore Meteorological Department is a model of what can be done in a Native State in this direction"

ii. Extract from D.O. No.T.55, Camp, Bombay, dated 18th February 1915 from the Director General of Observatories to the Meteorological Reporter to the Government of Mysore.

* * * * * *

"I was much impressed by the thoroughness and conscientiousness with which the work of the Observatory is carried out; as on my previous visits I realised that the data acquired were reliable and that I could rely on your friendly cooperation at any time that I might need it."

iii. Letter No.G.8168/G.M.340-15-2 dated 23rd December 1915 from the Secretary to the Government of Mysore, Revenue Department to the Meteorological Reporter to Government.

Sir,

I am directed to forward herewith a copy of 1 ·

No.8806 dated 3rd December 1915 received from the First Assistant to the Hon'ble the Resident in Mysore, and to state that the Government have perused with satisfaction the appreciative terms in which Dr. Gilbert Walker speaks of the services rendered by you and your staff to the Indian Meteorological Department in upper air research.

I have the honour to be,

Sir,

Your most obedient servant,

(Sd) M.S.Ramachandra Rao

For Secretary to Government,

Letter No.8806 dated the 3rd December 1915 from the First Assistant to the Hon'ble the Resident in Mysore to the Dewan of Mysore.

"I am directed to state that, under existing financial conditions, Dr.Gilbert Walker, Director General of Observatories, Indian Meteorological Department, proposes to cut down his tour of inspection next cold weather to a minimum and regrets that he will not be able to go south of Bombay unless something really urgent arises. He was looking forward to the pleasure of a visit to Mysore and of personally thanking the Durbar officials for the friendly and efficient manner in which they have co-operated with him and his staff in upper air research. But, as this does not seem possible, he has requested the Resident to convey to the Durbar an expression of the great obligations of the Indian Mete-

orological

Meteorological Department for the help the Durbar have rendered to them. Dr. Walker states that the results obtained in Bangalore are already beginning to give important information as to the movements in the higher strata of the atmosphere."

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iv. Extract from D.O. letter No.4109 dated Simla, 27th July 1916 from Dr. Gilbert Walker, Director General of Observatories to the Meteorological Reporter to the Government of Mysore.

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* * * *

"Under present arrangements no station south of Agra other than Bangalore is working throughout the year, though in the North two more are continuously observing; all four, Agra, Bangalore, Simla and Kojak are being used to determine the seasonal changes of air currents high up, and their special yearly characteristics, while for short periods of special weather one or two other stations are used temporarily in addition. Your pilot balloon flights are therefore likely to prove of considerable importance as representing conditions in south India which cannot otherwise be obtained: moreover the work done by your observatory is excellent in quality. As it forms an integral part of our scheme of upper air work for the benefit of meteorological science with special reference to India, I should be very sorry if it were curtailed."

* *

ENCLOSURE II.

i. Extract from Government Order No.6154-62/R.F.56-97, dated Bangalore, 14th January 1898, reviewing the Report on Rainfall Registration in the Province for 1896.

* * * * * *

"The thanks of Government are due to the Director of Meteorology for the well-arranged, useful and reliable statistics carefully collected and embodied in the report under review".

ii. Extract from Government Order No.R.638-47/R.M. 13-07-2, dated Bangalore, 27th July 1907, reviewing the Report on Rainfall Registration in Mysore for the year 1906.

* * * * * *

"Government are glad to acknowledge the great interest which Mr. Cook has taken in improving the system of collecting regular rainfall statistics and the valuable information he has compiled on the subject".

iii. Extract from Government Order No.R.1563-72/R.M.5 26-08-2, dated, Bangalore, 7th September 1908, reviewing the Report on Rainfall Registration in Mysore for the year 1907.

* * * * * *

*Though this report refers to a period when Mr. Cook was still in charge of the Meteorological Department, it is the first report prepared by Mr. N.Venkatesiengar, Chief Observer, after he assumed charge, and Government note that it continues to be as full of valuable information as the reports for previous years".

iv. Extract from Government Order No.R.9143-52/Agri. 207-08-2, dated Bangalore, 5th May ~~1908~~ 1909, reviewing the Report on Rainfall Registration in Mysore for the year 1908.

"The Report under review is interesting and useful".

v. Extract from Government Order No.R.6988-97/Agri 125-12-2, dated Bangalore, 23rd May 1913.

"The Deputy Commissioners are once again requested to see that such mistakes are not allowed to occur in future. Government are glad to notice that the report of the Chief Observer has been compiled with care".

vi. Extract from Government Order No.G.6010-19/G.M. 211-15-3, dated 15th November 1915, reviewing the Report on the Administration of the Meteorological Department during the year 1914-15.

"Government are glad to note the appreciative remarks recorded by the Director-General of Observatories regarding the work done in the Central Observatory."

True Copy

Enclosure VI

22

D.O. No. 41

Central Observatory,

Bangalore, 14th July 1916.

Dear Sir,

I beg to submit that it was with a shock of intense surprise that I read the very damaging remarks made by Mr. J.S. Chakravarti in his article on "Agricultural Insurance - Limit of Insurable Deficiency in Rainfall." in the May number of the Mysore Economic Journal just to hand, re the monthly average rainfall published in the Annual Rainfall Reports of the Meteorological Department, impugning their accuracy and thus lowering the prestige of a Scientific Department of Government in the eyes of the public. It seems to me that he has been very hasty in rushing into print without asking me for an explanation of the discrepancies that he thinks he has discovered in the published figures.

2. I informed Mr. Chakravarti at the outset when he first came to me for rainfall figures that the monthly averages for the years 1870-1893 for the Taluk Stations given in the first annual Report on Rainfall Registration in Mysore for 1893 were obtained by the late Mr. J. Cook who was then Director of Meteorology in Mysore and that the averages of subsequent years had been based on those figures. The source or sources from which Mr. Cook got them I do not know as I was then on the staff of the Central College. But of this I am certain that he could not have drawn upon his imagination for his averages. He must have had access at the time to figures which he believed were reliable for good reasons of his own. It must also be conceded that he knew what he was about and I am led to think that he could not have adopted misleading averages with the intention of misleading and mystifying future workers in the field of Mysore Rainfall. Subsequently, about the close of 1895, he sent out printed sheets for a Special Return of the monthly rainfall for as many years back as there was any record at each of the stations in the

State. The chief object in calling for this return was to ascertain in how many places there had been systematic registration of rainfall for the 25 years previous to 1895. The result more than justified Mr. Cook's anticipations of laxity and irregularity. Many of the records were evidently untrustworthy and incomplete and so no use was made of them to verify the averages already used. Mr. Chakravarti has been informed of this.

3. A reference to the rain reports for the years 1893 to 1896 will show how unsatisfactory the system of rain registration was at the period. There were 4.70 inch, 5 inch, 6 inch and 8 inch gauges in use all over the State and consequently there were many cases of a measure glass suitable for a gauge of one size being used with a gauge of another size. It was reported that an ounce graduated glass had been in use in Chitaldrug from 1876 with a 5 inch gauge. As the ounce glass is suitable for only a 4.70 inch gauge, it follows that the rainfall there must have been overestimated for a period of 18 years from 1876 to 1893. Not only this, the situation of gauges was in many cases unsatisfactory, being too near trees and building. There was also a good deal of laxity in the hour of measuring rainfall and ~~there~~ not in a few cases the rain had been put down to the day preceding that on which it was measured.

4. Now some unreliable monthly figures of the years 1870 to 1893 or 1895 have been included in the calculation of Mr. Chakravarti's averages and hence the differences on the strengt of which he has thought fit to condemn our averages as misleading which, I think, is grossly unfair.

5. Coming to the instances of mistakes pointed out by him with so much self satisfaction, he says that the Chitaldrug average rainfall from 1st January to 31st July calculated for the 43 years (1870-1912) is 10.69 inches; while the average

for the same period (43 years) as given in the Rainfall Report for 1913 works out as 11.09 inches. A fresh reference to the report will show that the average given therein is for the Chitaldrug Observatory for 20 years and not for 43 years as he has stated. The figures for Chitaldrug Observatory have been given as more reliable. If figures of the Chitaldrug Observatory be mixed up with those of another gauge in a different locality in the same station and the average struck, it is no wonder that difference arises.

6. The differences in the Gubbi and Pavagada averages from 1st January to 31st July and from 1st January to 31st October are, evidently due to Mr. Chakravarti having used the unreliable figures for 1870-1893 for those stations given in the special returns.

7. As regards the average rainfall of Davangere which he has trotted out as an example of the second class of cases requiring correction at his hands, kindly permit me to say that if he had paused for a moment to glance down the columns of monthly rainfall for the years 1870-1913 for the said station to find out the cause of the difference, he would have at once seen that there is something radically wrong in the monthly totals for 1875-1892 excepting the years 1877 and 1879 for which no figures are available. Rainfall has been put down for the first three months of the year January, February and March which is a period of very scanty precipitation; while for September, October and November, months of heavy rain, no figures are given. It is impossible to believe that there could have been rain during practically rainless months and no precipitation during rainy months, consecutively for a period of nearly 15 years. This is a very good instance of the untrustworthiness of special returns reports of rainfall for 1870-1893 already referred to. From 1893 onwards, the records appear to be more reliable. It is therefore natural to expect the discrepancy pointed out by Mr. Chakravarti in the case of Davangere. To quote his own words

25

"Even assuming that there was not a drop of rain in the years 1870, 1871, 1872, 1873, 1874, 1877 and 1879 the average for 43 years ending 1912 according to actual figures available would be 11.90 inches." But why? This Mr. Chakravarti has not stopped to inquire. Because rainfall has been entered in the special return for the three months January, February and March for nearly 15 years while actually none fell during those months

8. As regards the average of Kolakalmuru which is quoted as an example to which a third class of corrections is necessary, it will be seen that the figures for 1893, 1894 and 1895 in the special returns are wrong as proved by the annual returns received in this office for the same years. The mistake made in the special return of Davangere is repeated in this instance also. If the correct figures for 1893, 1894 and 1895 be used, the average from 1st January to 31st July for the 16 years 1870 to 1885 works out as 8.54 inches and not 2.94 inches as stated by Mr. Chakravar

9. It is on account of the unreliability and the many manifest inaccuracies contained in the special returns that they were not used for the verification of the original averages for 1870-1893 obtained by Mr. Cook and upon which, as I have already stated, the subsequent averages have been based and to which Mr. Chakravarti has made no reference in his article but not on account of the inability of the Meteorological Department which, I may be allowed to say, is at least equal to the arithmetical feat of saying that two and two make four and not either three or five.

10. In the light of the facts above mentioned, it will be conceded that the Meteorological Department knows better what rainfall figures to accept, what to reject and what to correct. The averages published in the Mysore Rain Reports have been compared with those calculated independently and used by the Government of India Meteorological Department and it is found that in

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the main they agree closely.

11. Common courtesy requires that Mr. Chakravarti should have referred his doubts to me in the first instance for an explanation. On the other hand, he has, in a leading journal now having a wide circulation, made wilfully the most damaging and unfounded remarks calculated to injure the reputation of the head of a scientific department by lowering him in public esteem.

12. In these circumstances, I demand an unqualified apology from Mr. Chakravarti by withdrawing his statements in the pages of the next issue of the Mysore Economic Journal. I also shall also send a rejoinder embodying my explanation to the Editor for publication in the same number.

13. Before closing, I beg to point out that it is against discipline for one officer of Government to impugn the work done by a brother officer in a journal with or without reasons. If one has got to say anything by way of criticism or suggestion, one ought to write to Government or to the party concerned. Since Mr. Chakravarti has promised further contributions to the same journal in continuation, I beg that you may be pleased to direct that no remarks of any kind regarding our averages should find a place in his articles. Mr. Chakravarti is quite welcome to accept only those figures which he can prove to his satisfaction to be mathematically correct.

Yours respectfully,

M. Venkatesa Iyengar

Sir M. Visvesvaraya, B.A., L.C.E., M.INST.C.E., K.C.I.E.,
Dewan of Mysore, B a n g a l o r e.

True Copy

ENCLOSURE IV.

D.O. No.41 Financial Secretariat,

Dated Bangalore, the 25th July 1916.

My dear Venkatesaiengar,

With reference to your D.O. letter No.41 dated the 14th July 1916 to the Dewan on one of my articles on Agricultural Insurance in the Economic Journal, I should like to discuss the matter with you in person. Kindly let me know when and where I can meet you.

It is not my object to criticise the work of any department but to study the subject of rain-insurance in a scientific spirit. I want all the help you can give me and we must put our heads together to make the best of the materials we have. You will be glad to learn that my scheme has attracted the attention of eminent authorities in Northern India and the Pioneer had recently two long leading articles on the subject.

Yours sincerely,

(Sd) J.S. Chakravarti.

To

N. Venkatesaiengar, Esq., B.A.,

Meteorological Reporter to Government,

Bangalore.

"True Copy"

ENCLOSURE V

Bangalore Observatory.

D.O. No.72 Dated 27th July 1916.

My dear Mr. Chakravarthi,

Thanks for your D.O. No.41 of the 25th July 1916.

Since your remarks about our rainfall averages in a widely circulated Journal have affected the reputation of a Scientific Department, I am sure you will see the necessity of making reparation in the pages of the same Journal as early as possible in the light of my explanation.

You may call at the Observatory any day next week between 11 A.M. and 5 P.M.

I have been giving you all the help I can and I may assure you that I shall continue to do so.

Yours sincerely,

(Sd) A. Venkatesa Iyer

To

Rajamantra Pravina Dewan Bahadur
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government.

True Copy

ENCLOSURE VI.

D.O. 71/Encl.one. General and Revenue Secretariat

Bangalore, 9th August 1916.

My dear Mr. Venkatesaiengar,

Herewith the article clearing up the misunderstanding which we discussed the other day. Will you kindly initial it in token of acceptance and return it to me as early as practicable for communication to the Economic Journal.

Yours sincerely,

(Sd) J.S. Chakravarti.

To

N. Venkatesaiengar, Esq., B.A.,

Meteorological Reporter to Government,

Bangalore

"TRUE COPY"

ENCLOSURE VII.

Central Observatory, Bangalore

D.O. No.97 Enc.1 Dated 14th August 1816.

My dear Mr. Chakravarthi,

In returning herewith your note on"Rainfall averages in Mysore" received with your D.O. letter No.71 dated the 9th August 1916, I write to inform you that I regret my inability to subscribe to everything stated therein.

2. I have thought over the matter again since we last met and I have come to the conclusion that your note as it is, will lead to further correspondence and needless controversy. I am not expected to read whatever one contributes to journals and newspapers.

3. In the light of my explanation contained in my D.O. letter No.41 dated the 14th July 1916 to the Dewan, it will be enough, if you kindly send a line to the editor, Mysore Economic Journal for publication, to say that you withdraw your statements regarding our rainfall averages. Let this matter drop there.

4. I may also say that my office staff had nothing whatever to do with the ~~getting~~ filling in of the rainfall forms sent by you. As you know, a special man was engaged for it at your own request and expense. Neither my staff nor myself exercised any kind of scrutiny over the figures copied.

5. As regards the object with which the special returns referred to were called, I invite your kind attention to Article 3, page 2 of the Report on Rainfall

Registration in Mysore for 1895 published by Mr. J.Cook.

Yours sincerely

(Sd) A Venkatesa Iyengar

To

Rajamantra Pravina Dewan Bahadur
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government.

"True Copy"

ENCLOSURE VIII.

Financial Secretariat,

D.O. No. 82. Bangalore, 22nd August 1916.

My dear Mr. Venkatesiengar,

I am in receipt of your letter dated the 14th August 1916. About the rainfall averages, I shall discuss the matter further with you at an early date if necessary. In paragraph 10 of your letter to the Dewan dated the 14th July 1916, you say "the averages published in the Mysore Rain Reports have been compared with those calculated independently and used by the Government of India Meteorological Department and it is found that in the main they agree closely". Would you kindly send me the Government of India records referred to by you and the corresponding Mysore records in which the figures have been compared showing how the figures agree closely? If necessary, I will call at your office to see the papers.

Yours sincerely,

(Sd) J.S. Chakravarti,

To

N. Venkatesiengar, Esq., B.A.,
Meteorological Reporter to Govt.,
Bangalore.

"True Copy"

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ENCLOSURE IX.

Central Observatory, Bangalore,

D.O. No.120. Dated 24th August 1916.

My dear Mr. Chakravarthi,

In reply to your D.O. letter No.82 dated the 22nd August 1916, I have sent herewith Vol.XXII. Part I of Indian Meteorological Memoirs giving the monthly and annual rainfall normals for all stations in India including Mysore, for comparison with the averages published in our rain report for 1912 or 1913 of which, I believe, you have copies. The volume may be kindly returned after you have done with it.

I may mention that the point at issue is clear and and definite and does not admit of any discussion. Even if the published averages were wrong, and it has been proved that they are not, my attention should have beer invited to it and no damaging remarks regarding the figures made in a journal. How our averages have beer arrived at has been already explained. Having this in view, I do not see any good in trying to prove that they are erroneous. It must be admitted that Mr. Cook must have verified the 24 years' average for 1870-1893 which is the basis of the averages for subsequent years before accepting them, though no records of his verification are forthcoming in this office. If he had been in doubt as to their accuracy, he would certainly have verified them again after receipt of the Special Returns, seeing that he controlled the Meteorological Department for nearly 16 years till April 1908.

Yours sincerely,

(Sd) A. Venkatesa Iyengar

J.S.Chakravarthi, Esq., M.A., F.R.A.S.

ENCLOSURE X.

Office of the Financial Secretariat,
Bangalore, 28th August 1916.

My dear Mr. Venkatesaiengar,

May I come to see you in your office to-day? If so, what time will suit you? Will you kindly send per bearer spare printed copies of your annual rainfall report for the years noted in the margin? They are required to complete my set and for facilitating some calculations.

1900, 1903, 1914, & 1915

Yours sincerely,

(Sd) J.S.Chakravarti,

To

N.Venkatesaiengar, Esq., B.A.,
Meteorological Reporter to Government,
Bangalore.

"True Copy"

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ENCLOSURE XI.

Central Observatory, Bangalore,

D.O. No.124 28th August 1916.

My dear Mr. Chakravarthi,

I have duly received yours of date. My assistant says that he has sent you the reports asked for - - excepting the one for 1915 which is in the press.

If not inconvenient, you may kindly call at the Observatory to-morrow at about 12 noon.

Yours sincerely,

(Sd) N.Venkatesiengar,

To

Rajamantra Pravina Dewan Bahadur
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government.

"True Copy"

ENCLOSURE XII

NOTE.

On Tuesday 29th August 1916 Mr. Chakravarthi called at the Meteorological Office and left with me without reading through, a draft of letter (copy is ~~xixxxx~~ attached to this) proposed to be sent to the Dewan and to the Editor of the Economic Journal. On being told that he was at liberty to send his letter to the Dewan and that I would abide by his decision, he said that the matter ~~xxxxxxx~~ might be squared up privately and that he would send to me for approval a draft of a paragraph which he would send to the Economic Journal.

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To the Editor
Mysore Economic Journal.

Accompaniments to Enclosure

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Sir,

With reference to Mr. Venkatesa Aiyangar's letter about the criticism of ~~rainguage~~ rainfall averages in my article in the May number of your journal, I have to offer the following observations. I shall first deal with his letter para by para and then summarise my conclusions.

I. My articles are not a hasty rushing into print but the result of a long and laborious study of the subject of Agricultural Insurance. The question of rainfall averages is a side issue in that investigation. As for consulting Mr. Venkatesa Aiyangar we met frequently and discussed the subject. He himself got the Talaguppa figures extracted from his records and entered in the special printed forms supplied by me. The man that did this work was selected by him but paid for by me from funds placed at my disposal by the Industries Committee. It is the discrepancies between some of these figures and the averages published by the Metrological Department that is now under discussion. Mr. Venkatesa Aiyangar repeatedly told me (indeed he says so in this letter also) that he did not know the basis of the Meteorological Department averages. I therefore thought it unnecessary to make any further reference to him.

2. Is it creditable that the present Meteorological Reporter also worked with Mr. Cook for many a long time - year (1892 - 1908) should have to say to day " The source or sources from which Mr. Cook got the averages, I do not know ". Was it not his business to inquire and know? Is not such knowlefge regarding the most important matter of his department expected from the head of a scientific department? If he does not know how the averages were got he has no right to defend them saying that Mr. Cook must have had " reasons of his own" and"knew what he was about" Are such argumetns acceptable in a scientific discussion?

3. If it is admitted that measurement and registration were so defective prior to 1893 as Mr. Venkatesa Iyengar states, how can it be claimed that Mr. Cook arrived at correct averages for 1870-1893 and that the present averages based on them are unchallengeable?

The story that an ounce glass was in use in Chitaldrug for the whole period from 1876 to 1893 with a 5 inch gauge and that the rainfall must have been overestimated is most probably a fiction swallowed too easily by the Meteorological Department

The average calculated from the recorded figures are

1873-1892 ----------24.48

1893-1912 ----------25.26

If there had been systematic overmeasurement in the earlier period the average would be expected to be more and not less. It is a strange irony of fate that the Meteorological Department instead of studying and correcting their own records should condemn them wholesale and that it should fall to outsiders to defend the records and show that they are not so bad as the department itself represents them to be.

4. Mr. Venkatesa Iyengar complains that the differences noted by me have arisen because I made use of some "unreliable monthly figures". As the figures were furnished by Mr. Venkatesa Iyengar himself I naturally assumed that figures palpably unreliable had been left out.

5. As the averages for most of the other taluk and district head-quarters are given for 43 years, that for Chitaldrug was also by oversight taken as one for 43 years. But this does not affect the correction required in the average in any way.

Moreover a most interesting class of discrepancies is brought to light in this connection in the Meteorological Department averages. The twenty years'(1893-1912) annual average as given in the Report for 1913 is 25.35 inches. The actual average worked out from the printed and published figures

for the several years comes to 25.26 inches, i.e., less by 9 cents.

A few other similar instances are

	Average calculated from the published figures of the Met. Dept.	Average for the same period given in the Met. Dept. Report for 1913.
Sira	23.15	23.28
Sulabele	27.76	28.23
Kadgudi	29.01	29.38

There are discrepancies between the details and the averages published by the department since 1893.

6. Mr. Venkatesa Iyengar has given reasons for considering the monthly figures for Davangere and Molakalmuru unreliable. Why has he not given similar reasons for Gubbi and Pavagada? No facts are known as to why the 1870-1893 figures for these taluks should be regarded as unreliable. A study of the figur shows no cause whatever for suspecting any irregularity. Bagepalli, Mandya, Heggaddevankote, Yedatore, Honnali, Tirthahall &c. are similar cases in which continuous figures for 43 years ending 1912 are available but the Meteorological Department average for 43 years is not the arithmetical mean of the annual figures and the reason for this discrepancy remains unexplained

7. The figures for the individual years for the Davangere Taluk as furnished by the Meteorological Reporter himself are apparently incorrect. Most probably the total annual figures are correct but there has been some transposition in the monthly figures. I expected that the Meteorological Reporter would have eliminated such figures from the statistics. The detailed monthly figures for Davangere will have to be studied and a fresh correction made if necessary.

8. Remarks similar to 7.

9. It is very easy to say that the special returns for 1870-1893 are all unreliable and therefore no use should be

made of them. But is it right to assume that the observers ~~ex~~ evolved all the monthly figures for 23 years out of imagination! There may be a few errors and irregularities. But the great majority of the special returns are, notwithstanding their condemnation by a Meteorological Department not disposed to study and scrutinise them, valuable and actual record of measured ~~fax~~ facts.

10. As regards comparison with averages calculated by the British India Meteorological Department, their calculation of average is in many cases for a different number of years. Moreover they simply say average for so many years without specifying which years are taken. Comparison with Mysore averages is not therefore easy. Moreover it is not correct to say that the figures in the Mysore and British Indian Reports agree closely. For example,

	40 years average 1870-1909 as given in the Mysore Report for 1910.	40 years average as given in the Indian Meteorological Memoirs published in 1913.
Nelamangala	26.96	27.70
Mulbagal	30.78	29.94
Maddagiri	21.98	22.41
Chiknayakanhalli	24.36	24.82
Nagar	190.54	150.85

Mr. Venkatesa Iyengar says that the Meteorological Department knows better what rainfall figures to accept. But far from the Meteorological Department knowing better they know nothing on their own admission about the origin of their rainfall averages. They know that "some one must have known".

11. Vide remarks on para 1. Mr. Venkatesa Iyengar having himself furnished the detailed figures and having repeatedly told me that he did not know how the averages were arrived at, there was no use in referring the matter to him.

As regards the suggestion contained in the last para of his letter I thank Mr. Venkatesa Iyengar for it. This subject has already been dealt with in my fourth article published in the April number of this magazine and after full consideration I have adopted not the annual total rainfall but the rainfall in the January-July and January-October periods.

Having dealt with Mr. Venkatesa Iyengar's letter above I wish to add a few remarks. I all along thought that from the forms that were filled up for me in the Meteorological office figures known to be palpably wrong had been excluded from scrutiny. I thought I had a right to this amount of help and cooperation from a fellow officer presiding over a scientific department. Mr. Venkatesa Iyengar now says that the statistics did not receive any scrutiny. The whole trouble has arisen out of this misapprehension.

In my third article published in the December number of last year I stated in minute and talukwar details the statistics that I had obtained from the Meteorological Department. If Mr. Venkatesa Iyengar had then told me that some of these figures require d further scrutiny and correction, I would certainly have taken his advice. The article under consideration appeared in the May number. Where was the rush into print complained of? Was it rushing on this side or sleeping on the other side?

In conclusion I leave it to all impartial students of rainfall statistics to judge for themselves whether the following facts are or are not established beyond reasonable doubt.

(a) That some of the averages published by the Meteorological Department are incorrect and cannot be adopted as basis for insurance calculations without correction.

(b) That the error is due in some cases to the published average not being the correct arithmetical mean of the figures published by the department itself (vide instances quoted in para 5 above).

(c) That the error is due in other cases to the average adopted in 1893 not having been checked and corrected with the help of the special returns even in cases where the most critic al study fails to disclose any cases for suspecting the accuracy of such returns(vide, for example,cases cited in (6) above).

(d) That in many cases the averages given by the Mysore Meteorological Department differ from those worked out by the Mysore Revenue Department - figures published in the gazette. The extent of such differences can be seen from my article in the issue of the journal for December last in which three pages were filled with discrepancies noticed in the figures of a single station. Such discrepancies have to be studied and reconciled before the Mysore Meteorological Department averages can be accepted as correct.

Mr. Cook recognised the importance of scrutinising such discrepancies and felt that in the absence of such scrutiny the correctness of the Meteorological Department figures was doubtful.

In one of his reports he observes -

> "The number of discrepancies is getting greater every year, which is the opposite of satisfactory. Either the returns published in the Gazette and sent up for inclusion in the Government of India annual volume of "Rainfall Data" are unreliable, or those sent in to this office are so. x x x x x x x x x x x x x x Rainfall registration is so very important that I trust the Government will make inquiry as to the cause of this extraordinary inconsistency."

This is the true scientific attitude of a man in search of truth. Contrast this with Mr. Venkatesa Iyengar's remarks that"the Meteorological Department knows better - - - - - -".

9.

(e) That in many cases there is a difference between the average recorded in the Mysore reports and those recorded in British Indian reports and in some cases the difference is very great (vide figures given in para 10 above). These have also to be studied before the Mysore Meteorological Department averages can be accepted as correct.

(f) That the general rules for correcting averages arrived at in the articles under consideration are correct and their correctness has not been questioned even by Mr. Venkatesa Iyengar. He only questions one or two examples by which I illustrated the rules. If the illustrations are wrong, it is due to the fact that they are based on detailed figures for which I depended on Mr. Venkatesa Iyengar himself.

(g) That it is curious that in spite of the fact of Mr. Venkatesa Iyengar having been associated with Mr. Cook in meteorological work from 1892 to 1908 he is forced to confess " The source or sources I do not know.". The averages of 1893 form the basis of all averages that are being published from year to year.

(h) That initiation as regards the work of scrutinising the rainfall statistics available for the period prior to 1893 in the Metecrological Office and printing them in a convenient form had to come from outside the Meteorological Department.

(i) That the Meteorological Department instead of recognising the importance of such work are trying to make it more difficult by condemning the whole mass of their statistics prior to 1893 as unreliable which, except in some cases, they are not.

A few months ago Government passed an order in accordance with my suggestion in the third article of this series that all available rainfall statistics for the State should be scrutinised and printed in a convenient form. This work has ~~been taken~~

been taken up and Mr. Venkatesa Iyengar has promised all possible help. If this work which should have been taken up long ago be satisfactorily completed and kept up to date hereafter, students of economics requiring the rainfall statistics of Mysore may hope to have all available and reliable data in a convenient form in future

(Signed) [illegible].

True Copy."

ENCLOSURE XIII

FINANCIAL SECRETARIAT,

Dated Bangalore, 29th August 1916.

My dear Mr. Venkatesa Iyengar,

Would not the accompanying paragraph serve the purpose we have in view? If so, kindly initial and return it. I shall insert it at the beginning of my next article and then neither your letter nor mine need go into the journal. The Dewan Sahib will also be simply told that we have settled the matter in the way indicated above and that he need not trouble to reply your D.O. letter.

Yours sincerely,

(Sd) J.S. Chakravarti,

To

N. Venkatesa Iyengar, Esq., B.A.,
Meteorological Reporter to Government,
Bangalore.

"True Copy"

ACCOMPANYMENT TO ENCLOSURE XIII.

I am very sorry indeed that the criticism of the Mysore Meteorological Department Rainfall figures in my article in the May number of this journal has been misunderstood in some quarters. Nothing written in that article was intended to mean that the Department did not know its business and was not doing the best work with the present establishment and facilities. I have the greatest respect for the character and ability of the present head of the Department and his help always cheerfully rendered has been invaluable to me in these investigations. He has now pointed out certain errors in the monthly rainfall figures for Davangere and Molakalmuru Taluks adopted by me in my articles in the May and June numbers and the conclusions arrived at therein regarding them and some other taluks will require revision. The fact is, that there is a large mass of old rainfall statistics in manuscript in the records of the Meteorological Department which has not yet been fully scrutinised. There are also some discrepancies between the Mysore Meteorological Department figures on one hand and those of the Mysore Revenue Department and of the Government of India Meteorological Department on the other. All that I meant was that a study and scrutiny of all these diverse data would result in an improved degree of accuracy in the Mysore rainfall figures. I found that such action was necessary to make them fit/ for forming the basis of large monetary transactions in a system of agricultural insurance. Under a recent order of Government all available rainfall data in Mysore State are to be printed and published after careful scrutiny. This work has already been undertaken

jointly by Mr. N. Venkatesa Aiyangar, the Meteorological Reporter in Mysore and myself. When our work is completed, students of economic subjects will find all reliable information on the subject collected together in a convenient form for reference.

Yours truly

ENCLOSURE XIV

D.O. No.129 Central Observatory,

Bangalore, the 30th August 1916.

My dear Mr. Chakravarti,

I have read the paragraph sent with your letter of date. It seems to me that the public will not be interested in knowing the manner in which rainfall averages are arrived at.

I should be satisfied if you sent a line or two to the following effect:-

"My criticism of the Mysore Meteorological Department rainfall figures in my article in the May number of this Journal has elicited a reply from Mr.Venkatesa Iyengar, Meteorological Reporter to Government. He has pointed out certain errors in the monthly rainfall figures for Davangere and Molakalmuru taluks adopted by me in my articles in the May and June numbers and the conclusions arrived at therein regarding these and some other taluks will require revision. I take this opportunity to withdraw the remarks that I have made in the May number regarding rainfall averages published by the Meteorological Department."

The letter that you left with me yesterday as also the note received to-day are both returned herewith.

Yours sincerely,
(Sd) B.Venkatessiengar,

To

Rajamantra Pravina Dewan Bahadur
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government.

"TRUE COPY"

ENCLOSURE XV

D.O. No.94 General & Revenue Secretariat,

Dated Bangalore, 2nd September 1916.

My dear Mr. Venkatesa Iyengar,

With reference to your letter of 30th August 1916, I beg to state that I cannot withdraw the statement made in my May article, viz., that the rainfall averages published by the Meteorological Department are in some cases inconsistent and misleading. I consider them so for the following and other reasons:-

(a) There are innumerable discrepancies between the rainfall figures published by the Meteorological Department and those published by the Revenue Department and in the face of these discrepancies the statement put forward by both the Departments are not only misleading, but bewildering. As the department mainly responsible for rainfall statistics it is the business of the Meteorological Department to study and reconcile these discrepancies and publish an authoritative set of figures which they have never done.

(b) The Meteorological Department have not studied and scrutinized their own records nor agreed their averages with details even when such details are available. I am however quite ready to correct the statements made regarding Davangere and Molakalmuru etc., and also to acknowledge your valuable help in my studies and I therefore propose prefixing the attached paragraph to my next article.

If even after this you want to enter into a contro

versy

controversy you are free to do so.

Kindly let me know what you propose doing so that I can communicate with the Dewan and the Editor, Mysore Economic Journal, accordingly.

Yours sincerely,

(Sd) J.S.Chakravarti,

To

N. Venkatesa Iyengar, Esq., B.A.

Inclosed"

Accompaniment to enclosure

XV.

Para 1 of the Seventh article on Agricultural Insurance.

The criticism of the Mysore Meteorological Department rainfall figures in my article in the May~~xxx~~ number of this journal has fortunately attracted the notice of the department and elicited a protest. Mr. N. Venkatesa Iyengar, Meteorological Reporter, has now pointed out certain errors in the monthly rainfall figures for Davangere and Molakalmuru taluks obtained from his own office and adopted by me in my articles in the May and June - - numbers and the conclusions arrived at therein regarding these and some other taluks will require revision. I thank him for this but the general question of discrepancies in rainfall statistics in Mysore remains unanswered. The fact is, that there is a large mass of old rainfall statistics in manuscript in the records of the Meteorological Department which has not yet been fully scrutinized. There are also very many discrepancies betwee the Mysore Meteorological Department figures on one hand and those of the Mysore Revenue Department and of the Government of India Meteorological Department on the other.

It is, I think, undeniable that a study and scrunity of all these diverse data would result in an improved degree of accuracy in the Mysore rainfall figures. I found that such action was necessary to make them ~~fix~~ fit for forming the basis of large monetary transactions in a system of Agricultural Insurance. Under a recent order of Government all available rainfall data in Mysore State are to be printed and published after careful study and scrutiny. This work is proposed to be undertaken jointly by Mr. N. Venkatesa Iyengar, the Meteorological Reporter in Mysore and myself. When the work is completed, students of Economic subjects will find all reliable information on the subject collected together in a convenient form for reference. I am obliged to Mr.N. Venkatesa Iyengar personally for the help he has given me in my investigations. But if a student of an Economic subject having occasion to use Mysore rainfall figures finds innumerable differences between the figures published by the Meteorological Department on one hand and those published by the Revenue Department as well as those contained in its own manuscript re-

cords

records on the other, he may be excused for thinking the statements misleading and bewildering to him. And naturally he would hold that department responsible for the situation which exists for dealing with the subject and claims the status of a Scientific Department and yet allows the discrepancies to go unstudied and unrectified.

True Copy

ENCLOSURE XVI.

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D.O, No.135. Central Observatory,

Encs.2. Bangalore, the 6th September 1916.

My dear Mr. Chakravarti,

Your D.O. letter No.94 of the 2nd instant to hand.

2. I regret that I am still unable to see how the published rainfall averages of the Meteorological Department are in any case inconsistent and misleading. The said averages appeared to you inconsistent because you compared them with the unpublished statistics collected by Mr. Cook in 1895 and put by in our records on account of their unreliability. I specially told you that these statistics were themselves unverifiable and were not used for purpose of verification. Your use of these figures in the manner you have done has, therefore, brought about this confusion.

3. The Meteorological Department has studied such records as might be of any possible use and published such statistics as could be relied upon. It has no control over the Revenue Department which publishes its own statistics and this Department has often commented in its annual reports on the discrepancies noticeable between the two sets of figures. Your article in the May number contains no reference to these discrepancies. In these circumstances it appears to me that your remarks as to what this Department ought to do are rather wide of the mark. This Department has, to the best of its lights, done its work to the statisfaction of Government and also to that of the Meteorological Department of the Government of India who are in the best possible position to judge of the nature and qualify of Meteorological work.

4. My main contention that the discrepancies, if any discovered by you should, in fairness and as a matter of official etiquette, have been referred to me in the first instance for an explanation before they were published in a public Journal, remains still uncontroverted.

5. However, I am loath to prolong this unpleasant controversy. If, therefore, you are prepared to amend as indicated in red ink your draft paragraph returned herewith, I shall withdraw my reply to your criticism and the matter might drop.

6. For facility of reference I append hereto your paragraph which will stand as now proposed to be amended.

7. Please let me know your desire at your early convenience.

Yours sincerely,

(Sd) N.Venkatesa Iyengar,

To

Rajamantra Pravina Dewan Bahadur,
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government,
Bangalore.

"True Copy"
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No 1

Accompaniment to enclosure

XVI

Para 1 of the Seventh article on Agricultural Insurance.

The criticism of the Mysore Meteorological Department rainfall figures in my article in the May number of this journal has fortunately attracted the notice of the department and elicited a protest. Mr. N. Venkatesa Iyengar, Meteorological Reporter, has now pointed out certain errors in the monthly rainfall figures for Davangere and Molakalmuru taluks obtained from his own office and adopted by me in my articles in the May and June numbers and the conclusions arrived at therein regarding these and some other taluks will require revision. [1] [I thank him for this but the general question of discrepancies in rainfall statistics in Mysore remains unanswered.] [2] [The fact is that there is a large mass of old rainfall statistics in manuscript in the records of the Meteorological Department which has not yet been fully scrutinized.] [3] [There are also very many discrepancies between the Mysore Meteorological Department figures on one hand and those of the Mysore Revenue Department and of the Government of India Meteorological Department on the other.

1) Note. may be omitted. A Journal is hardly a place for discussion between Govt. officers as to questions relating to rainfall figures and discrepancies, if any.

2) Note. The following may be substituted: The fact is that the monthly rainfall statistics for the years 1870–1895 which were obtained by the late Mr. J. Cook at the end of 1895 and put by by him on account of their unreliability and incompleteness were, under a misapprehension of their nature, utilized by me in connection with my articles.

3) May be omitted. Vide remarks made in the letter.

It is, I think, undeniable that a study and scrutiny of all these diverse data would result in an improved degree of accuracy in the Mysore rainfall figures. I found that such action was necessary to make them fit for forming the basis of large monetary transactions in a system of Agricultural Insurance.] Under a recent order of Government all available rainfall data in Mysore State are to be printed and published after careful study and scrutiny. This work is proposed to be undertaken jointly by Mr. N. Venkatesa Iyengar, the Meteorological Reporter in Mysore, and myself. When the work is completed, students of Economic sub jects will find all reliable information on the subject collected together in a convenient form for reference. I am obliged to Mr.N. Venkatesa Iyengar personally for the help he has given me in my investigations. [4] [But if a student of an Economic subject having occasion to use Mysore rainfall figures finds innumerable differences between the figures published by the Meteorological Department on one hand and those published by the Revenue Department as well as those contained in its own manuscript re-

(4) Note. May be omitted. Please see remarks in my letter. A student of an economic subject is not likely to have access to the manuscript records in a department which have been put by as unreliable and so there will not be much cause for confusion in his case.

cords

records on the other, he may be excused for thinking the statements misleading and bewildering to him. And naturally he would hold that department responsible for the situation which exists for dealing with the subject and claims the status of a Scientific Department and yet allows the discrepancies to go unstudied and unrectified.]

(5) Note. The following may ~~be~~ Kindly added: In the circumstances, I have much pleasure in withdrawing my remarks such as "misleading", "palpably wrong", &c., that have crept into my article in the May number of this Journal regarding the rainfall averages of the meteorological Department.

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Accompanyment No.2 to Enclosure XVI.

Para 1 of the Seventh article on Agricultural Insurance as proposed to be amended.

The criticism of the Mysore Meteorological Department rainfall figures in my article in the May number of this journal has fortunately attracted the notice of the Department and elicited a protest. Mr. N. Venkatesa Iyengar, Meteorological Reporter, has now pointed out certain errors in the monthly rainfall figures for Davangere and Molkalmuru taluks obtained from his office and adopted by me in my articles in the May and June numbers and the conclusions arrived at therein regarding these and some other taluks will require revision. The fact is that the monthly rainfall statistics for the year 1870-1895 which were obtained by the late Mr. Cook at the end of 1895 and put by him on account of their unreliability and incompleteness, were under a misapprehension of their nature utilised by me in connection with my articles. Under a recent order of Government all available rainfall data in the Mysore State are to be printed and published after careful study and scrutiny. This work is proposed to be undertaken by Mr. N. Venkatesa Iyengar, the Meteorological Reporter in Mysore and myself. When the work is completed, students of Economics subjects will find all reliable information on the subject collected together in a convenient form for reference. I am obliged to Mr. Venkatesa Iyengar personally for the help he has given me in my investigations. In the circumstances, I have much pleasure in withdrawing my remarks such as "misleading, palpably wrong and etc." that have crept into my article in the May number of this Journal regarding the rainfall

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averages of the Meteorological Department.

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ENCLOSURE XVII

D.O. No.102 Financial Secretariat,

Bangalore, 7th September 1916.

My dear Venkatesa Iyengar,

With reference to your letter No.135 dated the 6th September 1916, I beg to enclose herein a revised draft para. To secure finality I may say that this is not liable to any further change. I have tried my best to make it acceptable to you.

Kindly also let me know whether you agree about the enclosed draft to Government or whether you would like any changes in the suggested procedure.

Yours sincerely,

(Sd) J.S. Chakravarti,

To

N. Venkatesa Iyengar, Esq., B.A.,

Meteorological Reporter to Government,

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Accompanyment to Enclosure ~~xx~~ XVII

Para 1 of the Seventh article on Agricultural Insurance.-

The criticism of the Mysore Meteorological Department rainfall figures in my article in the May number of this journal has fortunately attracted the notice of the Department. Mr. N. Venkatesa Iyengar, Meteorological Reporter, has now pointed out certain errors in the monthly rainfall figures for Davangere and Molakalmuru taluks obtained from his office and adopted by me in my articles in the May and June numbers and the conclusions arrived at therein regarding these and some other taluks will require revision. I thank him for this and a few more remarks on the general question of discrepancies in rainfall statistics in Mysore will not be out of place.

2. The fact is that there is a large mass of old rainfall statistics in manuscript in the records of the Meteorological Department. There are also very many discrepancies between the Mysore Meteorological Department figures regarding rainfall on one hand and those of the Mysore Revenue Department on the other. It is, I think, undeniable that a study and scrutiny of all these diverse data and reconciliation of discrepancies between them would result in an improved degree of accurany in the Mysore rainfall figures. I found that such action was necessary to make them fit for forming the basis of large monetary transactions in a system of Agricultural Insurance. I meant nothing more than this and I have much pleasure in withdrawing such remarks as "misleading, palpably wrong, etc." which crept into my article in the May number and which may convey a wrong impression about the quality and value of the work of the department. It could never have been my intention to impugn the substantial

substantial accuracy of the bulk of the figures of the Meteorological Department, for in that case the problem of Agricultural Insurance would have to be given up as hopeless.

3. Under a recent order of Government all available rainfall data in Mysore State, including such portions of old manuscript records as may be found reliable are to be printed and published after careful study and scrutiny. This work is proposed to be undertaken jointly by Mr. N. Venkatesa Iyengar, the Meteorological Reporter and myself. Action will also be taken to avoid in future the numerous discrepancies which appear year after year between the two sets of rainfall figures published by the Meteorological Department and the Revenue Department respectively. When these steps are completed, students of economic subjects will find all reliable information on the subject collected together in a convenient form for reference. And I shall then have the satisfaction of feeling that my studies of rainfall statistics of the State have not been in vain.

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ENCLOSURE XVIII.

Central Observatory,

D.O. No.146 Bangalore, 11th Sept. 1916.

Dear Sir,

Your D.O. No.106 of the 7th instant duly received by me would seem to suggest that you have revised your paragraph more out of condescension than out of a desire to do reparation to a Government Department which you have causelessly wronged. I regret that you cannot still appreciate the situation in a proper light. Perhaps you would do, if another responsible Government offider having got copied from the archieves of your office prerendition unpublished financial statistics of certain Taluks had, without any reference to you and on a complete misapprehension of their bearing, impugned the correctness of the figures in your published annual financial statements and reports and characterised them in public print as "misleading, palpably wrong, etc". In the present instance, apart from the general inaccuracy of your criticisms, it is hardly fair that you should have attempted to launch them in public print after you were told that the old unpublished figures were unverified and mostly unreliable. When, therefore, your error was pointed out, instead of making amends in a straightforward manner, you have chosen to add insult to injury by a series of epistles and intended communications conceived in a condescending and self-complacent vein, suggesting that it was hardly "creditable to me", was "my business" to do this and that etc. I refrained from giving expression to my sense of resentment, thinking that on calmer reflection you would yourself adopt a more reasonable attitude. I see now that I was altogether

altogether mistaken in this respect. Your revised paragraph does not contain, as it ought, any genuine expression of regret for the injury you attempted to do to the established reputation of a Government Scientific Department and raises, as it ought not, matters which it would not be in public interests to discuss in a journal and are wholly irrelevant to the issue in controversy between us. In the circumstances, I must decline to have any further correspondence with you on the subject. I am asking the Editor of the Economic Journal to publish my article with alterations and in the meantime it is my intention to take legal advice as to what steps should be taken to have the matter brought up before a judicial tribunal where I hope to get reparation in the event of my not obtaining it by other modes. I have little doubt that before such a tribunal you will have ample opportunities of displaying your expert knowledge on meteorology, economics and other sciences and of showing how far the bullying attitude assumed by a high placed officer towards an offended brother officer could be justifiable.

As regards your draft letter to Government, I shall say what I wish to if I hear from Government.

Yours faithfully,

(Sd) N.Venkatesa Iyengar

To

Rajamantra Pravina Dewan Bahadur
J.S. Chakravarti, Esq., M.A., F.R.A.S.,
Financial Secretary to Government,
Bangalore.

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